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(FILE 'HOME' ENTERED AT 09:23:16 ON 03 FEB 2005)

FILE 'CAPLUS' ENTERED AT 09:23:44 ON 03 FEB 2005

10/862,980

L1 70252 S DIONE?
L2 25 S MONO KETAL?
L3 9 S L1 AND L2
L4 100272 S CARBON TETRACHLORIDE OR CCL4
L5 0 S L3 AND L4
L6 191830 S CHLOROFORM OR CHCL3
L7 1 S L3 AND L6

=> s ch2cl2 or methylene chloride

74420 CH2CL2
116150 METHYLENE
1017490 CHLORIDE
13818 METHYLENE CHLORIDE
(METHYLENE(W) CHLORIDE)
L8 84805 CH2CL2 OR METHYLENE CHLORIDE

=> s ketal?

L9 15088 KETAL?

=> s l8 (6w) l9

L10 13 L8 (6W) L9

Feb. 3, 2005

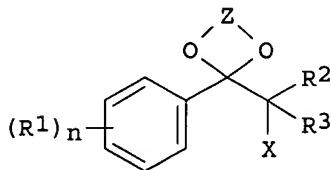
L10 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:97409 CAPLUS
 DN 138:137294
 ED Entered STN: 07 Feb 2003
 TI Method for preparing α -halogenoalkyl aryl ketones and their
 halogenated intermediate products
 IN Roques, Nicolas; Saint-Jalmes, Laurent
 PA Rhodia Chimie, Fr.
 SO PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM C07D317-16
 ICS C07D317-22
 CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 25
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003010156	A1	20030206	WO 2002-FR2458	20020711
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2827602	A1	20030124	FR 2001-9805	20010723
PRAI	FR 2001-9805	A	20010723		

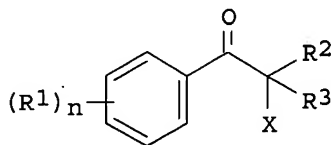
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003010156	ICM	C07D317-16
	ICS	C07D317-22
FR 2827602	ECLA	C07C041/56; C07C043/313; C07C045/59; C07C045/63+49/84; C07D317/16; C07D317/22

OS CASREACT 138:137294; MARPAT 138:137294
 GI



I



II

AB The invention concerns a method for preparing cyclic ketals I [R1 = H, alkyl, alkenyl, alkoxy, alkoxyalkyl, cycloalkyl, aryl, arylalkyl, aryloxy, acylaoxy, NO2, halogen, mono-, poly-, perhaloalkyl; R2, R3 = alkyl, cycloalkyl, aryl arylalkyl; n = ≤ 5 ; n ≥ 2 , with vicinal R1 = (un)saturated cycloalkyl, aromatic, heteroarom. ring; X = halogen, preferably Cl or Br; Z = (CR5R6)m(O)p(CR5R6)q; m = 2 - 4; p = 0, 1; q = 0, m; R5, R6 = H, linear or branched C1-10-alkyl, Ph] and ketones II selectively

monohalogenated and more particularly chlorinated. More particularly, the invention provides a method for preparing intermediate products such as α -halogenoalkyl aryl ketone cyclic ketals and α -halogenoalkyl aryl ketones. The method is characterized in that it consists in reacting an alkyl aryl ketone II ($X = H$) with a sulfonyl halide in the presence of an aliphatic diol, $Z(OH)_2$, capable of forming with the carbonyl function, a cyclic ketal. Thus, acetanisole was treated with $HOCH_2CH_2OH$ and SO_2Cl_2 in $PhCl$ to give 53% I [$R_1 = OMe-4$, $R_2 = R_3 = H$, $Z = CH_2CH_2$] and II [$R_1 = OMe-4$, $R_2 = R_3 = H$].

- ST haloalkyl aryl ketone cyclic ketal prepn; alkyl aryl ketone ketalization
aliph diol halogenation sulfonyl halide
- IT Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(alicyclic, halogenation-ketalization of alkyl aryl ketones in; method
for preparing α -halogenoalkyl aryl ketones and their halogenated
intermediate products)
- IT Ketones, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkyl aromatic, chlorination-ketalization of; method for preparing
 α -halogenoalkyl aryl ketones and their halogenated intermediate
products)
- IT Ketones, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(aromatic, chloroalkyl; method for preparing α -halogenoalkyl aryl
ketones and their halogenated intermediate products)
- IT Bronsted acids
RL: CAT (Catalyst use); USES (Uses)
(catalyst for hydrolysis of cyclic ketals of α -halogenoalkyl aryl
ketones; method for preparing α -halogenoalkyl aryl ketones and their
halogenated intermediate products)
- IT Ketals
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(cyclic α -halogenated, preparation and hydrolysis of; method for
preparing α -halogenoalkyl aryl ketones and their halogenated
intermediate products)
- IT Aromatic hydrocarbons, uses
Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(halogenation-ketalization of alkyl aryl ketones in; method for preparing
 α -halogenoalkyl aryl ketones and their halogenated intermediate
products)
- IT Glycols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(ketalization by, of alkyl aryl ketones; method for preparing
 α -halogenoalkyl aryl ketones and their halogenated intermediate
products)
- IT Ketalization
(of alkyl aryl ketones with diols in the presence of sulfonyl halides;
method for preparing α -halogenoalkyl aryl ketones and their
halogenated intermediate products)
- IT Halogenation
(of alkyl aryl ketones with sulfonyl halides; method for preparing
 α -halogenoalkyl aryl ketones and their halogenated intermediate
products)
- IT Hydrolysis
(of cyclic ketals of α -halogenoalkyl aryl ketones; method for
preparing α -halogenoalkyl aryl ketones and their halogenated
intermediate products)
- IT 76-05-1, Trifluoroacetic acid, uses 1493-13-6, Trifluoromethanesulfonic
acid 7647-01-0, Hydrochloric acid, uses 7664-38-2, Phosphoric acid,
uses 7664-39-3, Hydrofluoric acid, uses 7664-93-9, Sulfuric acid, uses
10035-10-6, Hydrobromic acid, uses
RL: CAT (Catalyst use); USES (Uses)

(catalyst for hydrolysis of cyclic ketals of α -halogenoalkyl aryl ketones; method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

IT 57-55-6, Propylene glycol, reactions 98-86-2, Acetophenone, reactions 99-91-2 100-06-1, Acetoanisole 107-21-1, Ethylene glycol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

IT 494221-42-0P, 2-(Chloromethyl)-2-(4-methoxyphenyl)dioxolane
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

IT 7791-25-5, Sulphuryl chloride 13637-84-8, Sulphuryl chloride fluoride 74474-90-1, Sulfuryl bromide
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

IT 2196-99-8P, Chloromethyl 4-methoxyphenyl ketone
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

IT 75-09-2, **Methylene chloride**, uses 108-90-7, Chlorobenzene, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent for halogenation-**ketalization** of alkyl aryl ketones; method for preparing α -halogenoalkyl aryl ketones and their halogenated intermediate products)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Blasinachim; EP 0034871 A 1981 CAPLUS
 (2) Nitrokemia, I; EP 0054278 A 1982 CAPLUS
 (3) Sanchez-Viesca, F; CIENCIA (MEXICO CITY) 1972, V27(6), P185 CAPLUS
 (4) Siegel, W; US 5710341 A 1998 CAPLUS
 (5) van Reet, G; US 4160838 A 1979 CAPLUS

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